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THE
IRRECONCILABLE RECORDS;

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OR,

GENESIS AND GEOLOGY.

BY

WILLIAM DENTON.



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THE IRRECONCILABLE RECORDS ;

OR,

GENESIS AND GEOLOGY.

WE live in the nineteenth century, when science is abroad knocking at every door, not excepting the church door ; flashing light into the dark corners of superstition and bigotry, regardless of the hooting of the owls and the screaming of the bats that inhabit them. It is useless to lock and bolt the door ; for science carries the club that can demolish every barrier. In vain you hide in the dark ; for her lamp makes day of the blackest night. Build *tu* the skies, she will soar and scan the very top stone ; dig centre deep, she will dive to the foundation. Heaven is not too high for her fetterless wing, nor the fires of hell hot enough to prevent her most searching examination.

Stimulated by her example, we are no longer content to crawl at a snail's pace, but have put on the "seven-leagued boots," and are striding with the pace of a giant. We have left slavery behind us, with its terrible curses, — old notions of the earth and heavens, which lie like bowlders by the wayside, as we still go marching on. It is vain for the cynic to sneer

at, the conservative to lament over, or the sceptic to deny, the progressive tendency of the age. It is true as the sun, and resistless as the motion of the planets.

Go, bid the ocean cease to heave,
The rivers cease to flow ;
Bid smiling spring retrace her steps,
And flow'rets cease to blow.
Go, drive the wild winds to their home,
The lightning to its nest, —
Then bid the car of Progress stay,
Whose coursers never rest.

This progressive spirit now manifests itself in theological investigations which can be no longer postponed. We boldly take up to-day what yesterday refused to touch." The Bible can no longer say, "You must not look at me save to bless. I am too sacred to be investigated." For we now say, "What better are you than others till you are tested? All pretended sacred books will claim exemption from criticism on the same grounds."

"The Bible," we are told, "is from God. It is all true, all divine; given to man to be his unerring guide. He who made the universe made this book; he who wrote his name in blazing suns upon the sky wrote this Bible, or inspired men to write it, who infallibly recorded what he desired that man should know." What might we not expect from it, if put in our hands for the first time? What grand revelations of truth, — as much superior to any thing that man can write as the solar system is superior to our clumsy machinery for representing it; surpassing man's highest unassisted efforts as a living landscape does a picture, or a

breathing, moving man his marble representative. We say, "It will, perhaps, tell us the story of the earth, its fiery birth, and how, during the myriad ages, it grew to be the noble tree, whose fruit is living, loving men and women. It may inform us of the orbs in space, of the universe lying beyond the range of the most powerful telescope. It will reveal to us the laws of health ; so that we may secure sound bodies, without which sound minds are next to impossible. Its revelations will be as much grander, truer, and more sublime than man's science, as the laws of nature are superior to our knowledge of them ; and, as far as we are acquainted with them, we shall find its statements exactly to agree." Stand aside, vain babblers, God speaks : be silent, listen, and learn.

We commence with the first verse of the first chapter of Genesis. "*In the beginning, God created the heaven and the earth.*"

Our knowledge of Nature and her operations compels us to object to this. Here is Miracle, whom no man knows, taking the place of Nature, with which we are all more or less acquainted. Here is the great miracle-worker, God, making out of nothing, as the word *bara* is generally supposed to mean, all that exists. Grant this, and we have only solved one problem by creating a greater. Whence came this wonderful Being, who did what in the nature of things seems to be absolutely impossible? We cannot help asking, "What was he doing for that eternity before he resolved to commence the work of creation?" For there must have been an eternity of duration before the beginning, when there was no heaven, no earth, no any thing. When, as the "Rig-Veda" says, —

"Nor aught, nor naught, existed : yon bright sky
Was not, nor heaven's broad roof outstretched above."

Accept a beginning, and you accept an eternity of idleness preceding it, when nothing was done because there was nothing with which it might be done. A solitary monarch for an eternity, considering the sort of kingdom he should make, and how that kingdom rule.

We can conceive of a boundary to the solar system, but none to the universe. So we can conceive of a beginning to the solar system, but none to the matter of which it is composed ; and, when we are introduced to a beginning, it is as unnatural as for some one to take us out of the universe, and introduce us to its commencement.

As far as we can see, the universe is self-sufficient. It does not need winding up by some outside power, like a clock, neither did it require some one to make it originally ; and only ignorance of the operation of natural law ever led any one to talk of a "beginning," or dream of a God who stands outside of nature, and makes all things by days' works.

But when was this beginning ? One modern would-be harmonizer of Genesis and geology assures us that "there is here no limitation of time, and, therefore, the expansion of astronomical and geological eons, cycle upon cycle, finds here the most ample scope. There was time enough in that 'beginning' for the evolution of the entire solar system from a single nebulous mass,—supposing that to have been the condition in which matter was first produced."* But

* Man in Genesis and Geology, p. 13.

this gentleman finds it convenient to forget that God himself — taking his view of the Bible — has declared, in the plainest possible language, when this beginning was. The creation of heaven was the work of the second day, — “God called the firmament heaven;” and we read in Exod. xx. 11: “For in *six days* the Lord made heaven and earth, the sea, and all that in them is;” and in Exod. xxxi. 17: “In *six days* the Lord made heaven and earth; and on the seventh day he rested, and was refreshed.” Whatever heaven and earth mean in the one place, we may reasonably conclude they mean in the other. But if God made heaven and earth in six days, then the beginning, in which he is said to have made them, must be included in those six days; for if not, then he did not make the heaven and earth in six days, as this passage informs us.

When we have learned that the heaven and earth were made in six days, we have a key to the time of the “beginning.” On the last of these six days, Adam was created; and, in the fifth and sixth chapters of Genesis, we can learn how many years it is from the creation of Adam to the Deluge. Adam was one hundred and thirty years old when Seth was born; Seth was one hundred and five when Enos was born; and thus we are furnished with the date of the birth of eight succeeding individuals to Noah, who was six hundred years old when the Deluge came. Thus we have the following table: —

Adam	.	.	.	.	.	.	.	.	130
Seth	.	.	.	.	.	.	.	.	105
Enos	.	.	.	.	.	.	.	.	90
Cainan	.	.	.	.	.	.	.	.	70

Mahalaleel	.	.	.	.	.	.	.	65
Jared	.	.	.	.	.	.	.	162
Enoch	.	.	.	.	.	.	.	65
Methuselah	.	.	.	.	.	.	.	187
Lamech	.	.	.	.	.	.	.	182
Noah	.	.	.	.	.	.	.	600
<hr/>								
Total	.	.	.	.	.	.	.	1,656 yrs.

The time from the creation of Adam to the Deluge, then, is one thousand six hundred and fifty-six years; and from that time the Bible furnishes us with dates, by which we learn that the Deluge took place about four thousand two hundred years ago. Then the creation of man took place, according to the Bible statement, less than six thousand years ago; and "heaven and earth, the sea, and all that in them is," were created in less than a week before the creation of man; and this was the "beginning."

But who does not know that this is false? Owen says, very justly, that the age of our planet alone, as indicated by geology, is "a period of time so vast, that the mind, in the endeavor to realize it, is strained by an effort like that by which it strives to conceive the space dividing the solar system from the most distant nebulae."* It would be just as true to say that the universe is but six thousand miles in diameter, as to say that it is but six thousand years old. Dr. Buckland, himself a clergyman of the Church of England, says, "Many extensive plains and massive mountains form, as it were, the great charnel-house of preceding generations, in which the petrified exuviae of extinct races of animals and plants are piled into stupendous

* Owen's Palæontology, p. 2.

monuments of the operations of life and death, during almost immeasurable periods of time." Again he says, "The truth is, that all observers, however various may be their speculations respecting the secondary causes by which geological phenomena have been brought about, are now agreed in admitting the lapse of very long periods to have been an essential condition to the production of these phenomena." Lyell talks of "myriads of ages" * of geologic time. Prof. Sedgewick of Cambridge, England, says, "During the evolution of *countless succeeding ages*, mechanical and chemical laws seem to have undergone no change; but tribes of sentient beings were created, and lived their time upon the earth." † Prof. Hitchcock of Amherst says, "The globe must have existed during a period *indefinitely long* anterior to the creation of man. We are not aware that any practical and thorough geologist doubts this, whatever are his views in respect to revelation." ‡ No geologist pretends to speak of less than millions of years for the time during which the various formations that constitute the crust of the earth were deposited.

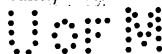
As geology demonstrates the great age of the earth, so astronomy equally establishes the great age of the heavenly bodies. Herschell, with his forty-feet telescope, saw nebulæ whose light, he calculated, must have travelled for nearly two millions of years before it reached our planet.§ The nebulæ must, therefore, have been in existence nearly two millions of years before, for their light thus to reach the earth.

* Lyell's Principles of Geology, p. 63.

† Discourse on the Studies of the University of Cambridge.

‡ Geology and Revelation, p. 22.

§ Dr. Pye Smith on Geology, Phil. Trans., 1800.



But, in reply to this, we are told by theologians, who admit the great age of the heaven and earth, that the days mentioned in Exodus, as also the creative days of Genesis, were not days of twenty-four hours each, but periods of time of vast extent. Hugh Miller, in his "Testimony of the Rocks," says, "I have been compelled to hold that the days of creation were not natural, but prophetic days, and stretched far back into the bygone eternity. That is, the facts of geology had "compelled" him to give a meaning to the word "day" that he would never have thought of giving to it otherwise. Nearly all would-be harmonizers of Genesis and geology are now "compelled" to take the same view, and make the word "day" cover a period millions of years in extent.

"Day," we are told, does not always mean a period of twelve or twenty-four hours. Very true; and how do we know when it means that, and when it means something else? By the way in which it is employed. If a man says, "I have seen nothing like it in my day," you understand him to mean that he has seen nothing like it during his life; but if he says, "I made that table in three days, commencing each day in the morning and leaving off in the evening," who could dream that he meant three years or thirty years? And who could consider him a truthful man if he did?

On the face of it, an interpretation that makes the word "day," in the first chapter of Genesis, mean an immense period of time, is strained and unnatural. "The evening and the morning were the first day." But how could the evening and the morning be a period of millions of years' duration? How could it be said with any propriety or truth, "In six days the Lord



made heaven and earth, the sea, and all that in them is, and rested the seventh day : wherefore God blessed the seventh day and hallowed it," if each of the six days were millions of years long, and the seventh evidently a natural day of twenty-four hours? Exod. xxxi. 17, must be read to signify, "In six periods, millions of years long, the Lord made heaven and earth; and on the seventh period, of twenty-four hours long, he rested and was refreshed!" The time of rest is out of all proportion small to the time of labor; and why should the same word, used in the same connection, mean in the first part of the verse millions of years, and in the last part only twenty-four hours? Hugh Miller, in order to escape this difficulty, represents the seventh day as still continuing. "Over it," he says, "no evening is represented in the record as falling, for its special work is not yet complete."* But the Bible says expressly, God "*rested*," and God blessed the seventh day, because he *had* "*rested*," not rests; and by this rest he "*was refreshed*;" not, he is being refreshed, as it ought to have been, if God's sabbath still continues. But Hugh Miller knew, as every geologist knows, that the process of world-making is as truly going on to-day as it did during the geologic ages. And, if God worked then, he works now, and manifests no disposition to rest and refresh himself.

That an ordinary day was meant is evident from the amount of work done on some of these days. All that God is represented as doing on the third day is to say, "Let the waters under the heaven be gathered together unto one place, and let the dry land appear."

* Testimony of the Rocks, p. 210.

And God called the dry land "earth," and the gathering of the waters "seas;" then he said, "Let the earth bring forth grass, the herb yielding seed, and the fruit-tree yielding fruit after his kind, whose seed is in itself upon the earth." In both cases, after God had spoken, the work is represented as being immediately done, — "it was so." Omnipotence called, and the world answered. In the 33d Psalm, we read in reference to the creation in general, and this day's work in particular, "He spake, and it was done; he commanded, and it stood fast." But, if these days are to represent the geologic periods, they must have been millions of years long. "Upward of sixteen millions of years are supposed to have elapsed since the creation of life upon the earth," says Dr. Anderson in his "Course of Creation." No geologist can consider the Silurian period as separated from our own by any less time than many millions of years; and yet no interpretation carries it back earlier than the second day. This second day, then, could not have been less than a period of two millions of years; and yet, according to this record, all that God did during this immense period was to utter two sentences and the two words "earth" and "seas." We thus have half a million years for each sentence, and half a million for each word; or counting the words in Hebrew, the language which God is supposed to have employed, we have twenty-five words, and eighty thousand years for God to utter each word! Who cannot see that an interpretation of the word "day" that involves such an absurdity as this must be false?

In favor of the idea that day means an indefinite period of time, we are sometimes told, that, in Gen. ii. 4, the work that is said to have been done in six days

in the first chapter is said to have been done in a day. "In the day that the Lord God made the earth and the heavens." But the fact is, we have here a different account of creation, by another person, who could probably see no reason why Omnipotence should work six days ; and he, therefore, teaches that the work of creation was done in one day. This second writer always calls the Creator Lord God (Jehovah) : whereas the first always says God, or, as it might have been more properly translated, Gods (Elohim) ; and this second account of creation is in many other respects quite different from the first.

Before theologians were, like Hugh Miller, "compelled" to elongate the Genesical days, they acknowledged that neither the Hebrew nor common sense would admit of any such interpretation of the word "day" as they now give it.

Thus Hitchcock says, "There is no evidence that the word 'day' is used figuratively in the first chapter of Genesis, as it is in all other places in Scripture where it means an indefinite period, except, perhaps, Gen. ii. 4. On the contrary, the Mosaic description of the creation appears to be a very simple and perfectly literal history, adapted to the most uncultivated minds. . . . "It seems from Gen. ii. 5, compared with Gen. i. 11, 12, that it had not rained on the earth till the third day. If the days were only of twenty-four hours, this would be very probable, but altogether absurd if they were long periods. Such a meaning is forced and unnatural, and, therefore, not to be adopted without a *very urgent necessity*." * A "forced and un-

* Hitchcock's Geology (1853), pp. 294, 295.

natural" meaning, then, may be given when there is a "very urgent necessity;" and this is what Hugh Miller and other harmonizers have felt.

Granville Penn says, speaking of geologists who enlarge the creative days, "Their theories oblige them to seek for much larger measures of time than the historian supplies; . . . and therefore they must obtain that length of time, *somehow or other*, from the text of Moses." He adds, "It remains for us to conclude, with Rosenmuller, upon every ground of sound learning, criticism, and philosophy, 'that we are to understand *natural days*; each of which, commencing from one evening, is terminated by the next, in which manner the Jews, and many others of the most ancient nations, reckoned *days*.' " *

In the early editions of "Comstock's Geology" — it has been dropped from the later — was the following letter from Moses Stuart, who was professor of sacred literature in the theological seminary of Andover. He was a good Hebrew scholar, and wrote a grammar of that language.

"The inquiries you make concerning the word *yam* in Gen. i., I will briefly answer. It does not signify an indefinite period of time, but always some definite one, when employed, as it is in Gen. i., in the singular number. It sometimes means a specific day of the week; sometimes *to-day*, that is, this day; sometimes a specific day, or season of calamity, joy, particular duty, action, suffering, etc. It is only the plural, *yamin*, which is employed for time in an indefinite way, as, 'in many days to come,' 'days of my

* Mineral and Mosaical Geologies, pp. 162, 163.

life,' &c. But, even here, the plural in most cases is a limited one, — limited by some adjective, numeral, &c.; and *yamin* signifies, therefore, a limited portion of time; often it stands for a *year*. . . . When the sacred writer in Gen. i. says, the *first day*, the *second day*, &c., there can be no possible doubt — none, I mean, for a *philologist*, let a geologist think as he may — that a definite day of the week is meant, which definite day is designated by the numbers *first*, *second*, *third*, &c. What puts this beyond all question in philology is, that the writer says specifically, The evening and the morning were the *first day*, the second day, etc. Now, is an evening and a morning a period of some thousands of years? Is it in any sense, when so employed, an indefinite period? The answer is so plain and certain that I need not repeat it. . . . If Moses has given us an erroneous account of the creation, so be it. Let it come out; and let us have the whole. But do not let us turn aside his language to get rid of difficulties that we may have in our speculations."

That is honest, that is manly: he meets the subject fairly, nor attempts to dodge the responsibilities. Stuart was not, however, a geologist, or he would have known that it was not to get rid of difficulties that Bible geologists had in their "speculations," that they resorted to this forced and unnatural definition of days, but to get rid of difficulties that facts, incontrovertible facts, presented.

If "day" means an indefinite period, in the first chapter of Genesis, — and this is the meaning put upon it by Bible geologists; for none of them pretend to settle whether it means exactly two, ten, or twenty million

years, — why six of them? One indefinite period is just as long as six. And, as the geologist very well knows, there are no six periods in the world's history into which it may be divided any more readily than into ten, or a still greater number. Lyell reckons fourteen principal groups of rocks, formed during fourteen successive periods, and thirty-five subordinate groups, representing as many periods.* Hitchcock enumerates ten principal geologic periods.†

If each day consisted of an evening and a morning, as this writer represents, and a day was a period millions of years in duration, then there must have been a period of darkness about as long as the period of light. How could the plants made on the third day survive this million years' night? Or if evening and morning mean a period of rest and a period of action, as some have suggested, then there must have been immensely long periods during which nothing was being accomplished. How is it that the rocks furnish no record of them? And if God rested a million years between every creative act, what need was there of a seventh day rest?

"In the beginning," then, was but five thousand eight hundred and seventy-four years ago; and thus the first verse of the Bible demonstrates that the book has had an entirely false estimate put upon it, and that one of its writers, at least, was entirely ignorant of what he professed to teach.

Some geologists, to harmonize this first chapter of Genesis with geology, supposed — and some theologians still suppose — that between the beginning spoken of in the first verse of Genesis, and the chaotic

* Manual of Elementary Geology, pp. 104-107.

† Hitchcock's Geology, pp. 98-100.

condition described in the second verse, there was an undescribed epoch of immense duration, during which all the forms existed whose remains are found in the rocks; and that by some grand convulsion all life was destroyed, and the world reduced to chaos, out of which it was brought, and into its present state, in six literal days, as the account in the first chapter of Genesis states. This is one of the straws clutched by drowning theologians to save them from acknowledging the unscientific, and especially the ungeologic, character of this Genesical cosmogony. Chalmers, Buckland, Sedgewick, Conybeare, Dr. Pye Smith, and Hitchcock harmonized after this fashion, which supposes a multitude of creations, during millions of years, for no purpose whatever, and of which the Bible is entirely silent; and an entire destruction of all beings that existed previous to the six days' creation, about six thousand years ago. Dr. Pye Smith, indeed, conceived that it was only a small part of the earth's surface that was brought into a chaotic state, and upon which the work of the six days was expended, in "adjusting and finishing its surface for most glorious purposes." He thus expresses himself, —

"This region was first, by atmospheric and geological causes of previous operation, under the will of the Almighty, brought into a condition of superficial ruin, or some kind of general disorder, probably by volcanic agency; it was submerged, covered with fogs and clouds, and subsequently elevated, and the atmosphere, by the fourth day, rendered pellucid." * Why did he not conclude by saying, "Now all this was done that

* Scripture and Geology, p. 275.

it might be fulfilled, which was spoken by Moses, saying" —. The Soul of the universe playing such fantastic tricks in some obscure corner, and then trumpeting forth such an utterly false story as this concerning them! It is, however, in some respects, a very convenient explanation; for, since the spot cannot be found where this took place, who can deny it? When Baron Munchausen affirmed his hatchet flew to the moon, he said those that did not believe it might go to the moon and see; and those who do not believe the Rev. Doctor's statement may find the spot where this took place, — or did not take place, — and contradict him. If but a portion of the earth, it may have been a small ten-mile valley; the darkness, a fog produced by its stream; the formation of light, the day that dispelled the fog; and the creation of the sun, moon, and stars, merely their appearance in fair weather. This pretended explanation is too silly for serious consideration, and, in reference to any other subject, would be laughed at by every sensible person.

Hugh Miller once held the idea of a great blank between the first and second verses in Genesis, but, as he says, was "compelled to arrive" at a very different conclusion. He says, "It is a great fact, now fully established in the course of geological study, that between the plants which in the present time cover the earth, and the animals that inhabit it, and the animals and plants of the later extinct creation, there occurred no break or blank, but that, on the contrary, many of the existing organisms were contemporary, during the morning of their being, with many of the extinct ones during the evening of theirs. We know, further, that not a few of the shells which now live on our coasts,

and several, even, of the wild animals which continue to survive amid our tracts of hills and forest, were in existence many ages ere the human race began. Instead of dating their beginning only a single natural day, or at most two natural days, in advance of man, they must have preceded him by many thousands of years. . . . The present creation was not cut off abruptly from the preceding one ; but, on the contrary, it dovetailed into it at a thousand different points. We are led, also, to know that any scheme of reconciliation which would separate between the recent and the extinct existences by a chaotic gulf of death and darkness is a scheme which no longer meets the necessities of the case. Though perfectly adequate forty years ago, it has been greatly outgrown by the progress of geological discovery.” *

Prof. Dawson of Montreal says, “ Geology testifies to the gradual introduction of existing forms, species by species, and to the similar gradual extinction of previous forms ; and the modern world is connected by one unbroken chain of organic existence with those pre-Adamite worlds which have passed away.” †

Ascending from the early Tertiary beds, which are certainly separated from our own time by more than a million years, we find the number of living forms increasing at every step ; so that the geologic past is only separated from the present by such a gap as time by its gradual changes has produced.

“ In the European Eocene,” says Dana, “ the fossils are all of extinct species ; in the Miocene, fifteen to twenty per cent are living ; in the older Pliocene,

* Testimony of the Rocks, p. 148.

† *Archæia*, p. 364.

forty to fifty per cent ; in the newer Pliocene, Norwich Crag, ninety per cent."* One by one new forms come in, as the stars appear in the evening sky ; the living species increasing at every step, as they approach nearer and nearer to man. There could, therefore, have been no such chasm of death, separating man and other living forms from the extinct species of the previous ages, as these harmonizers imagine.

"And the earth was without form and void ; and darkness was upon the face of the deep. And the spirit of God moved upon the face of the waters." — 2d verse.

According to this, the primitive condition of our planet was one in which it was without form, or, in other words, without shape, and void or empty. We can very readily see that there never was a time when the world was without shape ; for the law of gravitation, which gives it its present shape, must be as old as matter. There never could have been a time when the world was empty ; for this the pressure of the matter composing the earth must have prevented. But we are told that the Hebrew words, *tohu va bohu*, are not correctly translated without form and void : they should have been translated "desolate and empty," — that is, without an inhabitant. But what an unfortunate thing it is, that God should have written his word in a language that never was spoken by more than two or three millions of people at one time, and hundreds of millions of people, speaking other languages, should be compelled to depend on blundering translators, or master the intricacies of a dead language.

* Dana's Manual of Geology, p. 524.

Granting the accuracy of this new translation, we have a world submerged by water, surrounded by utter darkness, and the spirit of God, or, as the original may mean, a mighty wind, moving over the face of the waters. It is now all but demonstrated that the original condition of our planet was that of a fiery, fluid mass. Prof. James D. Dana, professedly a Christian, says, "The fact of the existence of the globe at one time in a state of universal fusion is placed beyond reasonable doubt."* Even Hugh Miller says, "I must continue to hold, with Humboldt and with Hutton, with Playfair and with Hall, that this solid earth was at one time, from the centre to the circumference, a mass of molten matter."† Mantell informs us, that, "from astronomical observations, the original crust of the earth is supposed to have been a superficial coating of solidified matter, produced by the cooling of the surfaces of an incandescent fluid globe."‡ Agassiz states, that "Our knowledge carries us far enough to warrant the assertion that there was a time when our earth was in a state of igneous fusion, when no ocean bathed it, and no atmosphere surrounded it, when no wind blew over it, and no rain fell upon it, but an intense heat held all its materials in solution."§ In this belief of the earth's original fiery condition, agree nearly all geologists and astronomers.

There could, therefore, have been no water covering its surface, and no darkness upon its face; and the writer could scarcely have more utterly failed to de-

* Manual of Geology, p. 134.

† Wonders of Geology, p. 31.

‡ Lectures on Geology, p. 296.

§ Geological Sketches, page 2.

scribe the original condition of the earth, had he known its real condition, and undertaken to describe its opposite. Many millions of years, indeed, must have passed after the formation of the earth, before water could rest upon its surface, on account of its extreme heat.

"And God said, Let there be light, and there was light. And God saw the light, that it was good; and God divided the light from the darkness. And God called the light Day, and the darkness he called Night; and the evening and the morning were the first day." — 3d, 4th, and 5th verses.

Had such statements been made in any other professedly sacred book, Christians would have regarded them as sufficient to settle beyond all controversy the fallible character of the book in which they were recorded. Light made before the sun, the luminous centre from which it proceeds. Day before the revolution of the earth upon its axis; for how could the earth revolve before the sun, whose influence alone enables it to revolve, had an existence?

How could the earth exist for three days before the sun, which we have the best of reason to believe is its parent? What should we think of a biography in which the writer informed us, that, when the subject was three years old, his father was born, and, when he was thirty years old, his grandfather came into existence? We would laugh, of course. But it is now almost universally acknowledged that the sun is the parent of the planets, and consequently of the earth. Our dependence upon the sun is greater than that of a child on a parent. A boy lives when his father dies; but blot out the sun, and the earth would at once

cease to exist. The earth's dependence upon the sun is as absolute as that of the day: let the sun expire, and both would cease; and before it existed they never could have been.

"God saw the light, that it was good."

Was this, then, the first time that he had beheld it? If not, why tell us that he saw it, and that it was good? If this was the first time, he must have dwelt in eternal darkness: no wonder that he thought the light was good; but it does seem a wonder that he did not try the experiment before.

"God divided the light from the darkness."

Previous to this time, then, they must have been united. What kind of light could it have been while it was united with darkness? But darkness, as we know, is merely produced by the absence of light.

It would have been just as correct to have said, "And God said, Let there be heat, and there was heat. And God felt the heat that it was good; and God divided the heat from the cold. And he called the heat Fire, and the cold he called Frost." No New-England boy, of twelve years of age and ordinary intelligence, would write such nonsense as this. Wherever light exists, it is light, and wherever absent it is darkness; and, in the nature of things, it must ever have been so.

"God called the light Day, and the darkness he called Night."

To whom did he call them? what need was there to call them any thing? When man comes, he will speak, and give them such a name as pleases him.

What constituted the day before the sun was in existence? The man who wrote the account probably had some idea on the subject that seemed rational to

him, however absurd in the light of science it may seem to us. To get at his idea, we need to consider the singular notions that obtained previous to the advent of astronomy. The writer of the first chapter of Genesis does not appear to have thought that the sun was the cause of the day. The light and the darkness were divided before its existence; the light occupied one half of space, and the darkness the other half. These revolved over the earth,—the darkness and the light,—“the evening and the morning;” the light being the day, which the sun was made to rule, as the moon was made to rule the night, or the darkness.

Ambrose, a celebrated Father of the Christian Church in the fourth century, says,* “We must recollect that the light of day is one thing; the light of the sun, moon, and stars another,—the sun by his rays appearing to add lustre to the daylight. For before sunrise the day dawns, but is not in full refulgence; for the mid-day sun adds still further to its splendor.” However childish such notions appear now, while scripture astronomy was taught and the facts were unknown, they were doubtless quite common.

“*And God said, Let there be a firmament in the midst of the waters, and let it divide the waters from the waters.*” — 6th verse.

The word *Rakia*, here translated firmament, is thus defined by Gesenius in his Hebrew lexicon. “*The firmament, the expanse, of the heavens, which is spread out, expanded, like a hemispheric arch above the*

* Quoted by C. W. Goodwin in *Essays and Reviews*.

earth ; splendid and transparent as sapphire, in which the stars are said to be fixed, and above which the Hebrews supposed a celestial ocean to exist." It is derived from a word signifying to spread out, or expand by beating. It divided the waters above from the waters beneath, and must, therefore, have been a solid vault. In Job xxvi. 11, it is said to have pillars, — "The pillars of heaven tremble." It had, as other Jewish writers teach us, "foundations" and "doors" (see 2 Sam. xxii. 8, and Ps. lxxviii. 23). The writer of the Book of Job says, "Hast thou with him spread out the sky, which is strong, and as a molten looking-glass?" (Job xxxvii. 18.) In Isa. xlv. 24, we read, "I am the Lord, that stretcheth forth the heavens alone." On the upper side of it God's throne is placed (Ez. i. 22-26), and from it God looks down (Isa. lxiii. 15) ; at times he shakes the heavens (Hag. ii. 6), — which, of course, he could easily do by stamping with his foot, — and stars fall from it upon the earth, "as a fig-tree casteth her untimely figs, when she is shaken of a mighty wind" (Rev. vi. 13). In God's fury, he will roll up the heavens "as a scroll ; and all their host shall fall down, as a leaf falleth off from the vine, and as a falling fig from the fig-tree" (Isa. xxxiv. 4).

Hitchcock acknowledges that the Bible is written in conformity with such ideas. He says, "It was the opinion of the ancients that the earth, at a certain height, was surrounded by a transparent, hollow sphere of solid matter, which they called the firmament. Where rain descended, they supposed it was through windows, or holes, made in this crystalline curtain suspended in mid-heaven. *To these notions the lan-*

guage of the Bible is frequently conformed." * Of course, because its writers did not know any better ; but, in the light of astronomy, how absurd is all this ! There is, as we know, no solid vault, no stars set in it, therefore no throne of God placed upon it ; there can be no shaking of the firmament, for there is none to shake ; and the stars could no more fall upon the earth than a thousand haystacks could fall upon the point of a pin.

Such were the ideas, generally, of the people of that age. The Greeks believed that the blue sky was a solid crystal sphere, to which the sun, moon, and stars were fixed, and which was constantly revolving. When it was discovered that some of the heavenly bodies had independent motions, they were supposed to be attached to other spheres, and seen through the nearer transparent spheres ; but they do not appear to have believed that an ocean of water existed above the crystal sphere, as the writer of the first chapter of Genesis and the Bible writers generally did. The question naturally arose in the Jewish mind, How does the rain fall, seeing that the firmament or heaven beneath the water is solid ? And the answer was, There are windows in it ; and when God wishes it to rain, his place of abode being on that side of the firmament, he opens the windows, and, of course, the water cannot do otherwise than fall. Thus, when God wished to drown the world, we are told (Gen. vii. 11), that, " the windows of heaven were opened ; " and when the deed was done, and God desired the land to appear on which to try his new experiment, we are informed (Gen. viii. 2),

* Religion of Geology, p. 9.

that "the windows of heaven were stopped." What a clumsy explanation of rain! And yet we are told that the Soul of the universe dictated such childish nonsense; and some scientific men are solemnly engaged in trying to transmute such base metal into the sterling coin of heaven. Alas, poor alchemists! you search in vain for the philosopher's stone by which such a miracle may be performed.

After the Deluge, the people of the earth undertook to build a tower whose top should "reach unto heaven." This is not at all surprising, since their views coincided with the views of the writer. Heaven could not be very high; and, had it not been for the misfortune that befell them, they might have reached it. But the Lord seems to have been of the same opinion; and, to prevent them from scaling his abode, he confounded their language, so that they could not understand each other's speech!

"And God said, Let the waters under the heaven be gathered together unto one place, and let the dry land appear; and it was so." — 9th verse.

If the law of gravitation then operated, and without it the earth could not have existed, the waters must have flowed to the lowest places, and this whether they were "let" or not: and if, by this flowing, they covered all the land, as is here indicated, the land could only be made to appear when the waters were gathered together, by heaping them above their true level; and, as soon as the miraculous power was withdrawn by which it was done, the water would cover the land as before. The only way to "let the dry land appear," if it was covered with water, would be to elevate the land; but of this the writer never seems to have

dreamed. He thought, as I remember thinking when a boy, that the sea is higher than the land, and I wondered what kept it from overflowing.

This represents the water and land as separated at once, and so continuing; and this less than six thousand years ago. But geology shows us that the land surface of the globe has been increasing since a very early period, and that sea and land have changed places many times; so that, instead of this being done in a day, or recently, it took innumerable ages to accomplish it, and it is still going on.

The conclusions arrived at by geologists are well presented by Dana. "The continents, while still beneath the waters, began to take shape. Then, as the seas deepened, the first dry land appeared, low, barren, and lifeless. Under slow intestine movements, and the concurrent action of the enveloping waters, the dry land expanded, strata formed, and, as these processes went on, mountains by degrees rose, each in its appointed place. Finally, in the last stage of the development, the Alps, Pyrenees, and other heights, received their majestic dimensions, and the continents were finished to their very borders."* The oceans were, of course, formed by a similar gradual process, which occupied periods of vast duration.

J. P. Lesley, well known as one of our best practical geologists, says, "The fact is, that no fixed relation of land and water has ever been established for the surface of the globe. From the beginning, land and water have been exchanging places. Every acre of the land-surface of the earth, which geology has

* Dana's Manual of Geology, p. 739.

examined, bears indubitable marks of having been not simply overflowed, but actually created at the bottom of the ocean." He adds, "Every part of every coast of every ocean is either rising slowly from the waters or sinking slowly into them."*

Agassiz makes a similar statement: "There was an age in the physical history of the earth when the lands consisted of low islands, when neither great depths nor lofty heights diversified the surface of the earth." Then he tells us, "The patches of land already raised above the water became so united as to form large islands. . . . The size of the islands, their tendency to coalesce by the addition of constantly increasing deposits, and thus to spread into wider expanses of dry land, marked the advance towards the formation of continents;" then, "Great mountains bound together in everlasting chains the islands which had already grown to continental dimensions."†

Instead of the continents being formed in a day, about six thousand years ago, they have been forming since the azoic period, and are not even finished yet.

The ignorance of this Elohist writer of Genesis is, however, no greater than that of many of his biblical successors. In the 126th Psalm, we read, "To him that stretched out the earth above the waters;" and in the 24th Psalm, "The earth is the Lord's:" "he hath founded it upon the seas, and established it upon the floods." The Jews are told, in the Ten Commandments, that they are not to make the likeness of any thing that is in the water under the earth,—a very

* *Man's Origin and Destiny*, p. 48.

† *Geological Sketches*, pp. 123-125.

needless command indeed. The writer of the flood-story could not see much difficulty in drowning the world, with an ocean above it, and another below it: the windows of heaven were opened, and let the one down, and "the fountains of the great deep were broken up" (Gen. vii. 11), and the waters of the other overflowed even the highest mountains! But the underground ocean has no more existence than the over-ground ocean; and the interior of our planet is widely different from the representations of these Jewish writers.

On the same day that the land and water were divided, we are informed that "*God said, Let the earth bring forth grass, the herb yielding seed, and the fruit-tree yielding fruit after his kind, whose seed is in itself upon the earth; and it was so.*" — 11th verse.

According to this statement, the first organic existences on this planet were grass, herbs, and fruit-trees, and they made their appearance less than six thousand years ago. Nothing could be much farther from the truth. If it had said that they were the last created, it would have been much nearer. The lowest rocks in which fossils are found abound with animal remains; and fruit-trees do not appear for vast ages after this, nor true grasses.

Let us hear the testimony of geology. "The Mosaic history represents the vegetable kingdom to have been created on the third day: but an examination of the rocks shows us that animals were created as early as vegetables; they are found in the lowest rocks which contain any remains of organized beings. We should expect to find the remains of the plants which flourished during that long third day; but there

is, at least, no evidence that the coal vegetation answers to this description."* The evidence of Hitchcock is very similar; and no man could be more anxious to reconcile "Genesis and Geology" than he; "Moses describes vegetables to have been created on the third day, but animals not until the fifth. Hence, about one-third of the fossiliferous rocks, reckoning upwards, or these deposited during the first three days, ought to contain only vegetables. Whereas, animals are found as deep in the rocks as vegetables: nay, in the lowest group, nothing but animals has yet been found."†

Although plant-remains have been found in lower beds since the above was written, it is still true that nothing but animals have yet been found in the *lowest* beds; and no geologist imagines that fruit-trees existed till millions of years after the appearance of animal life, while such grass, herbs, and fruit-trees as we are now familiar with, which the writer of the first of Genesis evidently meant, did not come into existence until a recent geological period: yet many of our existing plants, and even fruit-trees, were in existence long before man made his appearance. That the herbs and fruit-trees, represented as created on the third day, were these now existing, is evident from the fact, that, in the 29th verse, God is represented as giving them to man and beast for food.

Hugh Miller wishes to make us believe that this third day's works is represented by the fossil plants of the carboniferous period; but, when he forgets his

* Gray and Adams's Elements of Geology, p. 342.

† Hitchcock's Elementary Geology (1853).

theology, he tell us, that in the carboniferous period, "so far as appears, neither flock nor herd could have lived on its greenest and richest plains:" nor does even the succeeding flora, that of the oölite, "seem to have been in the least suited for the purposes of the shepherd or herdsman. Not until we enter on the tertiary periods do we find floras amid which man might have profitably labored as a dresser of gardens, a tiller of fields, or a keeper of flocks and herds." Our principal fruits, he informs us, were only introduced "a short time previous to the appearance of man," and the true grasses scarcely appear in a fossil state at all. "They are peculiarly plants of the human period." * Again he says, the plants of the carboniferous period are, "save in size and bulk, a poor and low flora after all. . . . We fail to meet a single dicotyledonous plant on which an herbivorous mammal could browse; . . . not a single fruit have we yet found good for the use of man."

To say, then, that this third day's creation refers to the plants of the carboniferous period is to do the greatest violence to fact, as his own statement, made when the necessity of harmonizing the facts of geology with the fictions of Genesis was not present to his mind, abundantly proves.

Long ages before our grasses, herbs, and fruit-trees existed, the seas so swarmed with mollusks that their shells made rocks thousands of feet in thickness; fishes of varied forms dwelt in the waters; reptiles as bulky as young whales peopled the ocean, and swarmed on the land; huge birds fished in the tepid waters, and beasts roamed over the land in search of their prey:

* Testimony of the Rocks, p. 78.

but of all these, and of the immense ages during which they existed, this Genesical cosmogonist knows, of course, nothing at all, and consequently says nothing.

If God created the plants of the carboniferous period on the third day, who created those of the oölitic period, which are entirely distinct from those of the carboniferous, not one species being common to both. If they were created without the necessity of God saying any thing, why could not those of the carboniferous, which are decidedly inferior to them, be made without God's speaking? But the plants of the early tertiary are distinct from those of the oölite, and those of the present from those of the early tertiary, each formation having characteristic forms. And who made all these? and why was God silent, in his account of creation, about the most important portions of his work?

“And God said, Let there be lights in the firmament of the heaven to divide the day from the night; and let them be for signs and for seasons and for days and years; and let them be for lights in the firmament of the heaven to give light upon the earth.” “And God made two great lights; the greater light to rule the day, and the lesser light to rule the night: he made the stars also. And God set them in the firmament of the heaven to give light upon the earth.”—14th, 15th, 16th, and 17th verses.

Nothing in this whole account so strikingly displays the ignorance of the writer as this. The earth has existed for three days, a solitary body in the universe; light is created, evening and morning, day and night are established; even grass, herbs, and fruit-trees called into existence; and now the sun, moon,

and stars are made for the especial benefit of the earth, when nearly all that they could do for it has been miraculously accomplished without them. The sun is to rule the day, and the moon to rule the night: but what the stars were for, the writer seems to have been unable to conjecture, so he merely says, "the stars also;" for the words "he made" have no corresponding words in the Hebrew. Five days were spent by Omnipotence in making this little world and its organized existences; and in a part of one day thousands of millions of suns were created, — some of them much larger than our sun, while that is more than a million times larger than the earth, — and this apparently with a very slight effort. Nearly a week in making and adorning this dew-drop world, and a boundless ocean of stars poured out at a breath, and dismissed with the careless remark, "the stars also." Could this writer have had the most distant idea of the hundred million suns, that we call stars, which are visible through a powerful telescope? No man who had ever looked through one could have written in that fashion.

God made them, and "*set*" them in the firmament of the heaven. They were not "*set*," then, when they were first made: this was an after-work. Where were the sun, moon, and stars, before they were "*set*" in the firmament of the heaven? This firmament, we must remember, divides the waters that are above from the waters that are on the earth (7th verse). But the waters above are held in the clouds: the firmament which separates between the water in the clouds and that in the seas must, therefore, be below the clouds. And since the clouds in fine weather are only five or

six miles high, the firmament of heaven, when most distant from the earth, cannot be more than five or six miles above the level of the sea; and the sun, moon, and stars, being "set" in it, cannot be at a greater distance: and when the clouds are lower, as they are in dull weather, the sun, moon, and stars cannot be near as far from the earth even as that; so that in balloons we might readily visit them! All the Bible writers, indeed, seem to have regarded the stars as shining points, and confounded them with the meteors, whose shining track is so frequently seen on the evening sky.

Just two days before the creation of man, sun, moon, and stars are created, according to this writer; and yet in the Potsdam sandstone, at the base of the Silurian formation, deposited ages before man's appearance, we find slabs of rock on whose surface are sun-cracks and ripple-marks, demonstrating the existence of sun and moon, and showing the operation of both.

On the fifth day, God is represented as saying, "*Let the waters bring forth abundantly the moving creatures that have life, and fowl that may fly above the earth, in the open firmament of heaven.*" — 20th verse.

How indefinite is all this! And it is not the indefiniteness of knowledge, which desires to relieve the reader of the burden of detail which greater definiteness might produce; but it is the indefiniteness of ignorance, which, for want of knowledge, cannot make itself understood, even by a multiplicity of words. "The moving creatures that have life" include, of course, mammals, birds, reptiles, fishes, and all animals below them, for they all have life, and move;

but this is not what the writer meant, or he would not have represented a separate creation of birds, beasts, and men. What, then, did he mean? In Gen. vii. 21, the same word, *sheretz*, translated here, "moving creature," is translated "creeping thing," and evidently refers to reptiles. In Lev. xi. 10, the same word is employed to signify all mollusks, articulates, and radiates of the water: "Whatsoever hath not fins and scales in the seas and the rivers, of all that swarm in the waters [all the *sheretzim* of the waters], they shall be an abomination unto you." In the same chapter, 29th and 30th verses, the weasel, mouse, tortoise, ferret, chameleon, lizard, snail, and mole, are called "*sheretzim* of the land." In the 41st and 42d verses of the same chapter, the word is again used: "And every *sheretz* that creepeth on the earth shall be an abomination unto you; it shall not be eaten: whatsoever goeth upon the belly, and whatsoever goeth upon all four, or whatsoever hath more feet among all creeping things that creep upon the earth." *Sheretz* here includes serpents, worms, snails, and flies, spiders, myriapods, and crustaceans, because they have more than four feet. What a medley!—radiates, mollusks, articulates, reptiles, weasels, mice, ferrets, and moles, but not rats, squirrels, or beavers. The use of terms so indefinite in their nature shows the complete ignorance of the writer on all matters relating to zoölogy. Taking the definition of the word given, as Christians generally believe, by God himself, on the fifth day were created invertebrate animals, including mollusks, crustaceans, and insects, and fishes, reptiles, birds, small mammals, and great whales, since in the 21st verse we are told that God created on the same

day great whales ; or, one day before man's appearance on the planet, shells, insects, fishes, reptiles, birds, and whales were created. Every geologist knows that such a statement is nearly as incorrect as words can make it. All these forms of life existed for immense periods of time before man. We find fossil shells as low as the base of the Silurian formation, fishes in the upper Silurian, insects in the Devonian, reptiles at the base of the carboniferous formation, birds in the oölite, small mammals in the lias, and whales in the cretaceous. I need tell no person, who is at all familiar with geology, that even the most recent of these formations is separated from man's first appearance by more than a million years.

But the record teaches that these various forms were all made on the same day, or, according to the would-be harmonizers, in the same period. But this statement is equally false. Mollusks and fishes, that are here placed together, are separated geologically by a time sufficient to lay down the whole of the lower Silurian rocks, which are, in several places, miles in thickness ; shells and great whales, which are represented as created on the same day, have no less than six grand geologic periods intervening ; and, even if we consider, as some harmonizers do, that *tanninim*, the word translated "great whales," should have been translated "sea-monsters," and, therefore, refers to the sea-reptiles of the Jurassic period, there would still be, separating them from the earliest shells and crustaceans, the enormous period necessary to lay down four intervening geologic formations.

The record also teaches that shells, crustaceans, fishes, birds, and whales were created two days after

grass, herbs, and fruit-trees. Had they been created as near together as this, it would, of course, have been impossible for the geologist to tell which came first. But it is quite certain that shells, crustaceans, and fishes were in existence long before there were any fruit-trees; and, before such fruit-trees existed as we are now familiar with, all these forms of animal life existed for immense ages, and were in the greatest abundance.

No man strove more than Miller to reconcile the teachings of geology with the statements of Genesis; yet he is constantly compelled to acknowledge what is in deadly conflict with them. Of the oldest organic period, the Silurian, he says, "It seems to have been, for many ages together, a creation of mollusks, corals, and crustacea. At length, in an upper bed of the system, immediately under the base of the old red sandstone, the remains of the earliest known fishes appear. The rocks beneath this ancient bone-bed have yielded, as I have already said, no trace of any plant higher than the thallogens, or, at least, not higher than the zosteracea,—plants whose proper habitat is the sea." * Shells, corals, and fishes existed, then, when the highest land-plants were sea-weeds; but it was long after this before reptiles, or great whales, or birds, appeared.

On the sixth day, God said, "*Let the earth bring forth the living creature after his kind, cattle, and creeping thing, and beast of the earth, after his kind.*" And, apparently towards evening of that day, God said, "*Let us make man.*" — 24th and 26th verses.

* Testimony of the Rocks, p. 90.

We have here the last day's work, — cattle, creeping things, beasts, and men. Less than six thousand years ago, cattle, creeping things, beasts, and men, first came into existence. Is this correct? In no sense. First, the order is wrong: it should have been creeping things, beasts, cattle, and men. But why introduce creeping things, when reptiles had already been included in the fifth day's work? This Genesical cosmogonist is so loose a writer, that it is difficult to say. He may have included aquatic reptiles in the *she-retz* which "the waters brought forth abundantly;" and reptiles may be meant by the creeping things created on the sixth day. With either meaning, it was a mistake to put creeping things after cattle, and before beasts; for land reptiles existed as early as the carboniferous period, and cattle not before the tertiary, and even the earliest small pouched mammals of the trias were two geological periods more recent than the earliest land reptiles. Reptiles preceded birds; other beasts preceded cattle, or ruminating mammals; while reptiles, beasts, cattle, and men, here said to have been created on the same day, or same period according to the harmonizers, are separated geologically by enormous periods of time. Reptiles, carboniferous; first mammals, or beasts, trias; first cattle, miocene tertiary; and first men, pliocene tertiary. Miller ranges vertebrates chronologically in the following order: first fishes, next reptiles, then birds, then marsupial mammals, and lastly true placental mammals, ages before man.*

In Genesis, we have first, cattle, reptile, beast, man;

* Testimony of the Rocks, p. 119.

second, beast, cattle, reptile, man. In geology, fish, reptile, bird, beast, cattle, man. Between the first reptile and first known mammal or beast is nearly the whole of the carboniferous period, and the entire Permian ; and between the first reptile and the first man, six grand geologic periods. The man who can reconcile the statements of the first chapter of Genesis with the teachings of geology would find no difficulty in reconciling the story of "Sinbad the Sailor" with the facts of geography.

"So God created man in his own image, after his own likeness." — 27th verse.

Then God must be in the image of man. Is it possible that this could have been the meaning of the writer? I think there can be no doubt of it in the minds of those who can look at the matter in an unprejudiced light. In the fifth chapter and first verse, which was probably written by the same hand, we read, "in the likeness of God made he him." He certainly did not mean that man was made in the moral or spiritual likeness of God, for this would be to make man God also ; but his physical frame was similar to that of the form of God. God, then, — Jehovah, the God of the Jews, — was in the image of a man : he had, as the Bible writers teach us, eyes, nose, mouth, lips, loins, bowels, and hair ; he breathed into man's nostrils, he spoke, he walked, he wrestled, "came down" and showed Moses a part of himself. The Jewish Jehovah was simply a magnified man, sometimes visible, but generally invisible ; and the infirmities of men seem to have marked him as strongly as they did the men who made him. Nature, I need hardly say, knows no such monster : the rocks bear no

witness of him; the heavens reveal no such idol, and display none of his handy-work; nor does the earth any of his day's work. Geology can find as much evidence of Jove or Brahma in the various formations as of Elohim or Jehovah.

But man was made, according to this statement, less than six thousand years ago. This is as far from being correct as the rest of the statements of this singular chapter. Baldwin says, "It is now as certain as any thing else in ancient history, that Egypt existed as a civilized country not less than five thousand years earlier than the birth of Christ."* But this is nearly one thousand years before the creation of man, according to Genesis; yet Egypt was then a *civilized* country.

Lenormant, in his "Manual of the Ancient History of the East," though anxious to make his readers believe that the Bible and history are in perfect harmony, acknowledges that "undoubtedly, positive facts prove that the antiquity of man on the earth is much greater than has been inferred from an inexact and too narrow interpretation of the Biblical narrative."† He places the first dynasty of Egyptian kings at 5004 B.C., or one thousand years before the creation of man, according to Genesis.‡ He acknowledges that the same system of writing existed then that was in use thousands of years afterward,§ and that there are no indications of any interruption produced by a deluge, which, according to the writer in Exodus, covered the tops of all mountains, and destroyed all life on the dry land, yet never disturbed the Egyptians!

* Prehistoric Nations, p. 32.

† Manual, p. 39.

‡ Manual, p. 197.

§ Ibid, p. 205.

Sir Charles Lyell * gives us a period of more than a hundred thousand years from the present, for the time when the primitive men of France lived, whose remains have been found in the valley of the Somme, with those of extinct elephants, lions, bears, hyenas, &c. Ansted, in his "Earth's History," says, "It would appear that the lowest human remains must be of a date carrying us back a quarter of a million of years."† Page tells us, "There is the amplest evidence of man having been an inhabitant of Western Europe for ages preceding the popularly received chronology."‡

But the popularly received chronology is that of the Bible, founded on the statements in Genesis; and, when the one falls, the other cannot stand. Man, according to Lyell, Ansted, and Page, — men pre-eminent in geological ability and carefulness of statement, — was on the planet many thousands of years before the earth had an existence, according to the writer in the first chapter of Genesis.

Broca, the anthropologist, says, "Man has left traces of his existence, marks of his industry, and remains of his body, in geological strata, the antiquity of which is beyond computation." He adds, "A person may easily convince himself that six thousand years constitute but a short moment in the life of humanity."§

Lesley says, "My own belief is but the reflection of the growing sentiment of the whole geological world, — a conviction strengthening every day, as you may

* *Antiquity of Man*, p. 204.

† *Earth's History*, p. 185.

‡ *Man: Where, Whence, and Whither*, p. 183

§ *Anthropological Review*, 1868, p. 47.

with little trouble see for yourselves by glancing through the magazines of scientific literature, — that our race has been upon the earth for hundreds of thousands of years.” *

Adam proves to be a very recent production, created by some unknown Jewish writer, and takes his place with King Arthur, Captain Gulliver, Robinson Crusoe, and other fictitious characters.

By what possibility can we account for the present varieties of the human race, supposing them to be all descended from a pair created but six thousand years ago? The author of “Man in Genesis and Geology,” though writing to harmonize science and Scripture, acknowledges that “the unchanged appearance of leading types of mankind, as far back as we can trace these in history, requires a considerable extension of time to account for their origin, provided we adhere to the physiological unity of the race. Upon Egyptian monuments that date back from one thousand four hundred to two thousand years before Christ, the negro is depicted with color and features as marked and characteristic as he exhibits at this day. When did this type originate, which has remained unchanged for more than three thousand years? If the type itself was a gradual product of time, how *much* time, before the date when it begins to appear upon Egyptian monuments, was necessary to establish its marked and unvarying features? According to a tablet of Sethos I., the Egyptians divided mankind into four principal races, — the Red (Egyptians), the Yellow (Ammonites), the Black (Negroes), and the White (Lybians).

* Man's Origin and Destiny, p. 66.

If all mankind were descended from a single pair,—and again, if the whole peopled earth was destroyed by the flood, with the solitary exception of the family of Noah,—how much time was required to originate peculiarities of race, which can be traced back without variation through the whole known course of history? In the present state of scientific knowledge, this whole subject is wrapped in obscurity.” *

Had it been a Hindoo sacred book, instead of a Christian one, that declared that the first human beings were created six thousand years ago, and that all their descendants, except one family, were destroyed by a flood a little more than four thousand years ago, Dr. Thompson would not have found any thing “wrapped in obscurity.” He would have said, “The fabulous character of these pretended sacred narratives is apparent at a glance; and it is inconceivable how men of intelligence can accept for truth such impossible stories.”

But the facts stated by Dr. Thompson are not nearly as serious as some that may be told. In the fifth Egyptian dynasty, in the reign of King Pepi, inscriptions were made which represent the “negroes” “as immediately adjoining the Egyptian frontier.” † Yet this dynasty is placed by Lenormant at from 3703 B.C. to 4235 B.C. The negroes were in existence, then, more than a thousand years before the Deluge, and even before the biblical time of the creation of man; for Pepi ruled near the commencement of this dynasty. Can any thing more clearly indicate the utter falsity

* Man in Genesis and in Geology, p. 101.

† Lenormant's Manual of the Ancient History of the East, p. 211.

of the Genesical story, than that its believers and advocates are compelled to acknowledge such damaging facts as these?

Gliddon tells us that it is "asserted by Lepsius, and familiar to all Egyptologists, that *negro* and other races already existed in Northern Africa, on the upper Nile, 2300 B.C."* But this is only forty-eight years after the Deluge. What color was Noah? What were his sons like? How could they in forty-eight years form "races" which have continued for four thousand years?

But Lepsius† also tells us that African *languages* were in existence as early as B.C. 3893; but this takes us within one hundred and eleven years of the creation of man. What language did Adam speak?

Again Lepsius says, "We are still busy with structures, sculptures, and inscriptions, which are to be classed, by means of the now more accurately determined groups of kings, in an epoch of highly flourishing civilization, as far back as the *fourth millenium before Christ*. We cannot sufficiently impress upon ourselves these hitherto incredible dates. The more criticism is provoked by them, and forced to serious examination, the better for the cause."‡

But this is within four years of the Bible date of creation. And yet this does not carry us back to the first Egyptian kings, as we have already seen. And when we arrive at Menes, the first king of Egypt, Dr. Thompson acknowledges that "we find already an empire consolidated from previous distinct govern-

* Types of Mankind, p. 181.

† Ibid., p. 86.

‡ Ibid., p. 60.

ments, and capable of building the great city of Memphis, with its magnificent temples and towers, and its huge dyke that turned the course of the Nile." * And prior to all this, and long prior, was the "stone ages" of Egypt, of which, says Wilson, "we detect evidences, old as the date of their civilization appears." † Quite recently, indeed, weapons in abundance, belonging to this early Egyptian period, have been found. Six thousand years is but as yesterday, compared with the length of time that man has been on the globe, existing, too, as races differing as widely from each other as they do to-day.

"Thus the heavens and the earth were finished, and all the host of them, and on the seventh day God ended his work which he had made; and he rested on the seventh day from all his work which he had made." — 2d chap. 1st and 2d verses.

When was the earth finished? When did the rivers cease to run, the glaciers to slide, the waves of the ocean to heave? When did the wheels of the universe stop, that God might rest? Ever the sun shines, the rain falls, the rivers flow, the cataract leaps, the waves dash; sediment is swept down by innumerable streams to fill the ocean depths, and lay the foundation of continents yet to be; earthquakes shake, and volcanoes pour out lava-streams now, as all these agents operated millions of years ago. Geology teaches clearly, that, just as the world was being made in the ages past, so is it being made to-day; and, if God was at work then, he is equally at work now. But the God that this writer

* Man in Genesis and Geology, p. 100

† Prehistoric Annals of Scotland, p. 41.

believed in was evidently a large man, who worked with muscles, stood off to see the effect as a sculptor might do, and could not refrain from an exclamation of delight as he saw the result of his labor ; who became fatigued on Friday evening, after such an arduous week's work, and needed Saturday for repose ; which repose the author of Exodus assures us refreshed him (Ex. xxxi. 17).

Looking at the account of creation as given in the first chapter of Genesis, and the first three verses of the second chapter, we see, that, when compared with the teaching of geology, every entire statement that is made is false. No man can take a single sentence in the account in its connection, and show its harmony with the revelation of science ; and, had it been the cosmogony of any other sacred book than the Bible, such men as Miller, Hitchcock, Buckland, Guiyot, Pye Smith, Dana, and Dawson, who have wasted their time in trying to perform the impossible, would have considered it a disgrace for any geologist to demean his science by attempting to harmonize its teachings with such childish statements.

Present it to us as the speculation of some early writer, who strives with his limited knowledge to conceive how the universe came into its present condition, and we can, of course, accept it as such, and treat it accordingly : then the geologist will no more apologize for the discrepancies between his science and Genesis than the geographer because he has found no such country as Brobdignag and Lilliput, or the historian because his history of the East does not agree with the statements in the "Arabian Nights' Entertainments."

Taking the views that were held by the people generally at the time the story was written, we can see how the writer came to make it as we find it. The earth was then regarded as the most important body of the universe; the stars were shining points, and the sun and moon about as large as they look to be: and the whole account reflects this view. The earth being the largest and most important body, in the writer's estimation, the most time must be given to it: hence, Omnipotence spends five days in making our planet and its inhabitants, but makes the rest of the universe, compared with which the earth is less than one of the invisible atoms comprising the air we breathe, in a single day. He makes the earth before the sun, moon, and stars, because they are so much less than the earth, and are only made to administer to it. He shrinks from having his God work in absolute darkness, so he has the production of light as the first operation of creative power after the production of the earth. He does not make light proceed from the sun, and form the day, because he did not know that the sun was the cause of the day, but supposed it to hold the same relation to the day that the moon does to the night; for he says, "the sun to rule the day, and the moon to rule the night," the sun no more producing the day than the moon does the night. The firmament, in which the sun, moon, and stars are "set," must, of course, be made before the bodies which are to be set in it; and since the firmament holds up an ocean of water, — necessary, as he supposed, to account for rain, — before the firmament was made, that ocean of water must have been upon the earth; hence "the deep," spoken of in the second verse.

Provision must now be made for the living creatures that are to dwell upon the earth. The first thing of necessity is the formation of dry land ; without it plants could not exist, and animals could not, therefore, subsist upon them. This thought, in the mind of the writer, leads to the first part of the third day's work, — the gathering together of the waters, and the formation of the sea and the dry land. Some have wondered that plants should be represented as being created in the third day, and the sun not till the fourth. There is, however, no difficulty, when we consider the opinions of the writer. Day and night were in existence, an ocean of water had been elevated above the firmament, so that light and water for the use of plants could be readily supplied ; the dry land was there, and he very naturally finishes the day's work by making grass, herbs, and fruit-trees. They must be made before the animals that are to feed upon them, and he could find no better time to make them than this. It was a matter of indifference when the sun, moon, and stars should be created ; and the writer, having concluded to finish with the creation of man, gives us, as the fourth day's work, the creation of the heavenly bodies. Then very naturally follows the creation of fishes, birds, and beasts, all being prepared for them, and man last, as God's most perfect work, and needing all that had been previously done.

The carelessness of the writer, and the utter absence of all scientific accuracy in his arrangement, is evident from the fact that the order in which God calls for the appearance of living forms is not always the order in which they are said to have appeared. Thus God says, Let the waters bring forth abundantly the moving

creature that hath life (*sheretz*), and fowl ; but God created great whales (*tanninim*), never mentioned in the call, then every living creature that moveth which the waters brought forth abundantly, and lastly fowls. God says, " Let the earth bring forth the living creature after his kind, cattle, and creeping thing and beast of the earth after his kind ; " but they are represented as being made in very different order. God made first the beast of the earth, then cattle, and lastly creeping things. In the command, it is cattle, creeping thing, beast ; in the creation beast, cattle, and creeping thing.

The errors of omission in this account of creation are nearly as great as its errors of commission. It says not a word of the original fiery condition of the earth, or of its gradual cooling, resulting in the upheaval of the land and the formation of the mountain chains. It consequently says nothing of the gradual development of the continents, of the gradual increase of land-surface from one geological period to another, but represents the present land-surface of the globe as made in one day and by one miraculous act.

It says nothing of the immense age of the earth, which is essential to enable us to understand the operation of the causes that brought it into its present condition, and, in the absence of this, accounts by miracle for what we now know to have been the product of law, operating during periods of adequate extent.

Dana says, " We assume that the forces in the world are essentially the same through all time ; for these forces are based on the very nature of matter, and could not have changed. The ocean has always had

its waves, and those waves have ever acted in the same manner. Running water on the land has ever had the same power of wear and transportation and mathematical value to its force. The laws of chemistry, heat, electricity, and mechanics, have been the same through time."* Hitchcock agrees with him: "The same general laws appear to have always prevailed in the globe, and to have controlled the changes which have taken place upon and within it. We come to no spot, in the history of the rocks, in which a system different from that which now prevails appears to have existed."†

The same general laws, and the forces in the world always the same, that must have been done by law, and gradually, which is represented in Genesis to have been done at once, and by miracle.

It is silent regarding the innumerable species of animals and vegetables which existed and perished before the present species came into existence; these forms regarding which it is silent having been, without doubt, much more numerous than those at present existing. Of these Hitchcock says, "There have been upon the globe, previous to the existing races, not less than five distinct periods of organized existence; that is, five great groups of animals and plants, so completely independent that no species whatever is found in more than one of them, have lived and successively passed away before the creation of the races that now occupy the surface. Other standard writers make the number of these periods of existence as many as twelve."‡ Who created all these?

* Dana's Manual of Geology. Introduction, p. 7.

† Religion of Geology, p. 20.

‡ Ibid., p. 22.

There is no mention of the processes by which miles of sedimentary rocks composing the earth's crust have been deposited, nor of the fossils imbedded in them,—texts in the earthly scriptures pregnant with such important meaning to those who properly study them.

It does not inform us concerning man's gradual development from so rude a beginning as our recent archæological and geological discoveries demonstrate; and his gradual brain-development, as indicated by his constantly improving skull, and the consequent advance in art and science, during a period that can only be rudely estimated at hundreds of thousands of years.

It does not inform us of the different centres of animal and vegetable life; every continent and large island having living forms that are peculiar to it, which could not have been the case had the accounts of creation and the Deluge been true.

It manifests the most entire ignorance of all the great facts of astronomical science; does not speak of the motions of the heavenly bodies, nor even of that of the earth, which produces day and night; but otherwise accounts for them by a bungling and altogether unnecessary miracle.

In short, it evinces in every verse the absolute ignorance of the writer on the subject that he professes to teach; and it would be easier to harmonize with the revelations of science the Hindoo cosmogonies, given in their sacred writings: they at least give us time, so essential in the operation of nature.

If the account of creation and development that geology gives is true, then this account in Genesis cannot be.

Genesis teaches that the world was made less than six thousand years ago : geology and astronomy that it came into existence many millions of years ago.

Genesis asserts that the entire universe was made in six days : geology proves that our planet has been incalculable ages in arriving at its present condition.

Genesis teaches that the earth was in existence three days before the sun, moon, and stars, and that these were made less than six thousand years ago : astronomy and geology demonstrate that the earth could not have been in existence before the sun, and that the sun, moon, and stars must have existed for incalculable ages.

Genesis testifies that God created the firmament on the second day, that this firmament divided the waters which were under from those that are above, and that on the fourth day the sun, moon, and stars were set in it ; and that this took place within six thousand years : science reveals to us that no such firmament exists, that the atmosphere divides the waters above from those beneath, as it has done for an incalculable period, and that the heavenly bodies are not set in it, and never could have been.

Genesis declares that grass, herbs, and fruit-trees were the first created organic existencies, and that they were created three days before man and one day before the sun : geology proves that corals, shells, crustaceans, and fishes existed long before grass, herbs, and fruit-trees ; that grass, herbs, and fruit-trees were on the earth long before man, but could not have been in existence before the sun, which shone on the lifeless globe for ages.

In Genesis, we read that great whales, fishes, and

birds were made on the same day, and this one day before man's creation : geology teaches that fishes were here long before fowls, fowls long before whales, and all these ages before man.

Genesis says that cattle, creeping things, beasts, and man were all made on the same day : geology, that creeping things were here millions of years before beasts, beasts before cattle, and all these long before man.

Genesis represents man as having been made less than six thousand years ago, in the image of God : science teaches that man has been here for a much longer time, and that the early man was in the image of the brute, and has *grown* into his present manly appearance.

Although there is not a single statement in this Genesical account of creation that is absolutely true, when taken in its connection, there are some truths incidentally told, — that is, they may be gathered from the narrative, but they are such as any one might have supposed.

The first is, that there was a time when no life existed upon the earth.

Second, plants and animals were produced before men.

Third, there was dry land before plants grew upon it.

Fourth, fishes and birds were in existence before beasts.

It would be difficult to find in any document, ancient or modern, as many affirmative statements and as little truth as in this narrative.

“ But geologists declare that there is the most perfect

harmony between the teachings of Genesis and geology. Dana says, 'The record in the Bible is, therefore, profoundly philosophical in the scheme of creation which it presents. It is both true and divine. It is a declaration of authorship, both of creation and the Bible, on the first page of the sacred volume.' " *

And yet Dana, though he tells us that the Bible record is true and divine, and that the Author of creation is the author of the Bible, says that the account of creation in Genesis "is brought out in the simple and natural style of a sublime intellect, wise for its times, but unversed in the depths of science which the future was to reveal. The idea of vegetation, to such a one, would be vegetation as he knew it; and so it is described." † But what becomes of the divinity of the author? Was the "Author of creation" unversed in the depths of science which the future was to reveal? The author of Genesis, according to Dana, mistook the sea-weeds of the Silurian period for the grass, herbs, and fruit-trees of the recent tertiary, — a mistake that no boy of ten years of age and of ordinary intelligence could make. Did God know no better than that? Or did his inspiration fail to save Moses from making such a gross error? What, then, was it worth? If it did not save him in this instance, which we have discovered, how often did it fail where we have no means of discovering? If Moses blundered in reference to earthly things, with which he was familiar, how can we trust his statements about heavenly things, of which he knew nothing? If the Bible has failed so utterly to give to a single human being an accurate

* Manual of Geology, p. 746.

† Ibid., p. 744.

knowledge of the creation of the earth, may it not have failed as utterly in its descriptions of God, devil, heaven, hell? And when science walks into the domain theological, as it must, will it find the Bible statements on these subjects just as false? and will there be as much need of pettifogging, that would disgrace a tenth-rate lawyer, to harmonize its theological statements, as there is now to harmonize its geological? No doubt.

Yes, Dana is right, when he says that the author of the account in Genesis was "unversed in the depths of science." He was not even versed in its shallows: every statement he has made proves it; but how that account can be true and divine which is thus acknowledged to be false, it, perhaps, requires an intellect versed in the depths of orthodox theology to discover.

He says, "A Deity working in creation like a day-laborer, by earth-days of twenty-four hours, resting at night, is a belittling conception, and one *probably* never in the mind of the sacred penman." It is, indeed, a belittling conception, but the probability is altogether in favor of its being in the mind of the penman, sacred or otherwise. If God was never fatigued, how could he rest? And what necessity was there for a day of rest? How could he, as the writer of Exodus asserts, rest and be "refreshed?" Was this, too, written in the "simple and natural style" of an intellect "unversed in the depths of science?" It looks very much like it, and, indeed, so does the whole book.

But what are we to think of those geologists, who, in the light of the facts of their science, assure their readers that the account in Genesis is "profoundly philosophical," "true and divine," at the same time

acknowledging that it is no such thing? What kind of an example do such professors set before the young men in college, who look up to them for guidance, and regard them as models? Is it any wonder that chicanery, sham, lies, and hypocrisy abound in society, when our students are brought up under the instruction of such men as these? One of the greatest evils inflicted upon us by the popular orthodox view of the Bible is the special pleading, hypocrisy, and even wholesale lying, which it engenders. The consequences to society, the wreck of conscientiousness and manliness, are fearful to contemplate.

It is refreshing to meet with an honest, outspoken man like Lesley, who says, "There is no possible alliance between Jewish theology and modern science. They are irreconcilable enemies. Geology, in its present advancement, cannot be brought more easily into harmony with the Mosaic cosmogony, than with the Gnostic, the Vedic, or the Scandinavian."*

"But Hugh Miller harmonized Genesis and geology."

If you had said he tried, and, failing, put an end to his life, you would have been much nearer the truth.

Miller's explanation is, that God presented a series of visions of creation to Moses, as "successive scenes of a great air-drawn panorama," † or "a diorama, over whose shifting pictures the curtain rose and fell six times in succession." God, then, undertook to teach Moses by a panorama or diorama, constructed for this purpose, Moses being the only spectator, how the work of creating the heavens and the earth was accom-

* *Man's Origin and Destiny*, p. 45.

† *Testimony of the Rocks*, p. 196.

plished. Moses, however, led away by appearances, supposed that to have been done in six days which was millions of years in being accomplished ; for Miller acknowledges that "there is nothing more probable, however, than that even Moses himself may have been unacquainted with the *extent* of the periods represented in the vision ; nay, he may have been equally unconscious of the actual extent of the seeming days by which they were symbolized." *

That is, they seemed to be days, and he took them to be days.

He thinks the first scene presented to Moses was that of the azoic period, the first day ; second, the Silurian and Devonian periods ; third, the carboniferous period ; fourth, the Permian and triassic periods ; fifth, the oölitic and cretaceous periods ; and, sixth, the tertiary period ; each scene corresponding to each day's work.

Since the azoic period includes the whole time up to the production of life, it includes the vast ages, probably longer than all the time that has transpired since, during which the earth was so intensely heated as to shine in the heavens like a sun. The panorama opens with the shoreless fiery sea of this period, the most striking thing that could be presented, yet Moses never mentions it. Could the artist have neglected to insert it ? He observes, when the world has cooled sufficiently, the expanse of waters and the cloudy sky, and, the sun being invisible, he supposes it is uncreated ; and what light he beholds he thinks was created by miracle, — an error the proprietor of the panorama never corrected.

* Testimony of the Rocks, p. 206.

From the second scene, corresponding with the Silurian and Devonian periods, he fancies that a solid firmament was created, which lifted up a large ocean of water and held it over the earth ; but he never sees the radiates, the mollusks, some of which, such as the orthoceratites, were sixteen to twenty feet long, whose remains have made rocks thousands of feet in thickness, in the Silurian formation ; he never notices the fish, bony-plated monsters, that swarmed in the ocean-deep of the Devonian ; he beholds not the plants, which, before the close of the Devonian, had attained the size of respectable trees. All these, which no modern artist would leave out of his panorama, the divine artist unaccountably neglected to represent ; or did he fail sufficiently to illumine the scene, so that Moses could behold it, or was Moses so careless that he did not notice them while that portion of the panorama was passing ? At all events, of these he says not one word.

When the curtain uprises on the third day, Moses beholds the great carboniferous forests of the coal measures,—miles of tree-ferns with their feathery tops, reed-like calamites over immense marshes, lepidodendrons with their scaly trunks and hairy branches, and the columnar sigillaria, forming together such a scene as mortal man never beheld before ; but Moses, poor man, thinks he sees the grasses and herbs on which the sheep and cattle of Midian fed, and the vines, fig-trees, date-trees, melons, cucumbers, and grains of Egypt, and, as soon as the curtain drops, writes this terrible blunder for the benefit of the ignorant millions yet to be born. It would have been well if the exhibiter had made some verbal explanations as the

panorama unrolled, or looked over the notes of his solitary spectator. It might have suggested improvements before the next exhibition to some Moses of another planet.

On the fourth day, represented by the Permian and trias, the sun shines out clear and warm, as Miller is pleased to imagine, for the first time. Moses is so dazzled that he sees nothing else during the whole day ; and, in the evening, he beholds, also for the first time, the moon and stars. Not having seen these heavenly bodies before, he fancies they were just made, and writes, "on this day God made sun, moon, — the stars also." During these two periods (Permian and trias), immense and strange reptiles moved over the land, fish innumerable swarmed in the waters, birds as high as young giraffes stalked along the shores, and even small mammals fed upon the insects that teemed in the tropical forests ; but of all these, Moses, so blinded by excess of light, sees nothing, and consequently says nothing.

On the fifth morning, Moses observes what had escaped his notice for three days, — the waters alive with fish ; he sees, too, the aquatic reptiles that he had not observed on the preceding day, and he now supposes them to be great whales : he still fails to see the land reptiles ; but the birds, that he did not see yesterday, he observes, and then writes down, at the conclusion of the day's performance, "great whales, other water animals, and fowls created this day." Another sad mistake.

The curtain rises for the sixth and last time, and reveals a perfected world ; and Moses again supposes that what he sees, and had not previously observed,

must have been created on that day, and writes, "cattle, beasts, creeping things, and men created this day," though creeping things and beasts had been presented before.

But how did Moses obtain his idea of what was done on the seventh day? Did the curtain rise, and show the Creator resting upon a flowery bank after his arduous week's work?

If any such "panorama" or "diorama" was presented to Moses, it was a most signal failure. Never did panorama so belie its name and derivation. It so utterly failed in every instance to indicate accurately what was done, that Moses mistook its meaning every time, and not a human being on the planet had the slightest conception of what was meant by it, till geology raised the curtain of the ages to some purpose; for the dumb rocks revealed what the talking Elohim, even by the aid of a panorama, could not accomplish.

Great names lead people to imagine they see wisdom in the most childish and nonsensical things, or Hugh Miller's pretended explanation would have been blown to atoms in the storm of ridicule it would have created. The Gods turning showmen, and to such poor purpose, surpasses even the freedom with which Homer treats the Grecian divinities.

But Genesis furnishes us with a second account of creation, differing very widely in many respects from the first. This commences with the fourth verse of the second chapter, and introduces us to another Creator, Jehovah, who is here styled Lord God.

"These are the generations of the heavens and of the earth when they were created, in the day that the Lord God made the earth and the heavens, and every plant

of the field, before it was in the earth, and every herb of the field before it grew : for the Lord God had not caused it to rain upon the earth, and there was not a man to till the ground. But there went up a mist from the earth, and watered the whole face of the ground. — GEN. ii. 4, 5, 6.

Here there is no such mistake as making the earth, and day and night, and evening and morning; before the sun; but there are errors nearly if not quite as grave. The heaven and the earth are made at the same time, the earth destitute of all organic existences, waiting for the Omnipotent Mechanic to furnish them : which he does in a very ungodlike manner ; for he makes every plant before it is in the earth, and every herb before it grows. The writer of the first account of creation was a natural poet ; the organ of ideality in his brain must have been comparatively large. We read his account, and we imagine the profound darkness, that the aching eye strives in vain to pierce ; we can hear the Master's voice, that nothing can disregard, "Light be," and see the flashing glory that shoots across the illimitable sea of darkness, and reveals the chaotic earth beneath us. Again we hear, "Let the earth bring forth grass, herbs, and trees ;" and, as the omnific word resounds, the naked earth starts into life and beauty at a bound, a wave of living green rolls round the globe, and on a thousand hills the lordly pines their nodding branches rear : false enough, but still poetic. But the writer of the second account, poor, narrow-headed bungler, has God, mechanic-like, make oaks, elms, palms, and pines, and stick them in the ground ; and, then, lest they should fail to grow, he makes a mist to water the whole face of the ground.

This writer has plants and herbs made before any form of animal life. We have seen how contrary this is to the revelations of geology. In addition to this, it had not rained upon the earth up to the time of the production of plants and herbs. This we know to be a great mistake. I have in my cabinet "Devonian rain-prints." They are common in the carboniferous formation; and yet both were deposited ages before our present plants came into being. The first writer shrank from telling *how* God made man. He knew, that, in doing so, he must certainly take that fatal step from the sublime to the ridiculous. The second writer has no such scruples: hence he says,—

"And the Lord God formed man of the dust of the ground, and breathed into his nostrils the breath of life, and man became a living soul. — 7th verse.

If a man wishes to obtain a conception of the silliness of this narrative, let him try to actualize this process of man-making. Where did this take place? In Egypt, where the raw material is so abundant? Did Jehovah mix it to a proper consistency for sticking together by the application of water, so large a proportion of which enters into the composition of human bodies? Did he mould it into a human form as a sculptor does his clay model? Did he use his fingers merely, or had he tools specially adopted to the purpose? When he breathed into his nostrils, did he place his mouth to the nose of the clay man, and did this transform the clay into flesh, blood, bones, muscles, sinews, nerves, and brain? Let this story be told to any scientific man for the first time, and would he not laugh at it, and regard it as he would "Jack and the Bean-stalk"? Of course he would. And is this story

any better for being old or long-believed, or because an unknown, ancient Jew tells it, and people in the days of the world's ignorance swallowed it ?

According to the Elohist writer of Genesis, God made man on the sixth day, male and female ; and doubtless the Jehovistic writer intended to have the two sexes made on the same day, though not at the same time ; but in his ignorance gives Adam a job that must have taken several days to accomplish, before Eve, "the mother of all living," was formed.

"And out of the ground the Lord God formed every beast of the field, and every fowl of the air ; and brought them unto Adam, to see what he would call them : and whatsoever Adam called every living creature, that was the name thereof. And Adam gave names to all cattle, and to the fowl of the air, and to every beast of the field. — 19th and 20th verses.

The Elohist writer makes birds on the fourth day, and beasts on the fifth, both before man ; but the Jehovistic makes man first, then birds and beasts. The species of birds are estimated by ornithologists at eight thousand ; the known land mammals or beasts are very nearly two thousand. These are all made out of the dust of the ground, then brought to Adam, who names them. Let us realize the magnificent conception of this writer ! Out of the ground Jehovah makes two pairs of ponderous elephants ; for there are two species, the finest proboscidian pachyderms the world ever beheld. He leads or drives them to Adam. Adam says Asiatic elephant to the one, Indian elephant to the other, or something just as good ; and away they march to the nearest wood, which must have been at no great distance. Jehovah

now finishes, and calls Adam's attention to, fourteen splendid rhinoceroses, — for there are seven species, — ripping up the bushes with their horns as they walk along. Adam, endowed with miraculous wisdom, gives appropriate names to every species; and away they go to the nearest river, which must have been convenient. Next come a host of bears, black, brown, white, grizzly, cinnamon, growling till Adam names and permits each to go to its congenial home. But here is a difficulty: the grizzly bear belongs to America. How shall it reach its proper place of abode? The white bear can only live in the vicinity of the sea, and in a high northern region. Did Jehovah carry or send the animals to their appropriate places after Adam had named them? If so, the amount of work done on this day must have been enormous. The gorilla and the chimpanzee to Western Africa, the orang-outang to Borneo and Sumatra, the spider-monkeys to South America, the buffalo and opossum to North America, a hundred and thirty pouched mammals to Australia, wingless birds to New Zealand, rheas to Patagonia, and an innumerable multitude besides, — all to be conveyed to their respective places of abode, where, as geologists know, similar animals have existed for ages.

Unless the animals were conveyed from the spot as soon as Adam named them, think what the consequence must have been. Besides the inappropriate temperature to which many animals must have been subjected, how long would some of these animals exist in the presence of others? An immense menagerie, in which lions, tigers, sheep, wolves, rabbits, hyenas, eagles, rats, cats, mice, pigeons, hawks, buz-

zards, vultures, condors, fowls, cormorants, owls, crows, geese, ducks, swans, swallows, king-fishers, penguins, ostriches, and thousands of others, are all turned loose! How long would the herbivora live that had been made and named, unless an extra number had been produced? And, if an extra number was produced, then the amount of labor on that remarkable day must have been much greater; and all this done before Eve was created. If each one was made in Jehovah's dust-shop, brought to Adam, and named in one minute, — and certainly there could have been no idle time under such circumstances, — then it took over one hundred and sixty-six hours to do it; and if Jehovah and Adam worked for ten hours a day, — and they did not probably work longer, before Avarice was born to drive the toiler, — then they were sixteen days and six hours in doing the work, during which time Adam was the sole human occupant of the globe.

The beasts and birds could not, of course, remember the names that Adam gave them; it would have been utterly useless to name them, unless some one did write them down, or remember them; hence Adam must have written down or remembered the ten thousand names given to all beasts and birds: but Adam was naked, destitute of pen, ink, and paper; and he must, therefore, have remembered them. But, to remember them, his memory must have been a miraculous one; yet of what possible use was it?

This story is not more ridiculous than false. Beasts and birds existed as early as the oölite at least, and during every succeeding geologic period, representing untold ages, to man.

"And the Lord God said, It is not good that the man should be alone ; I will make him an helpmeet for him. And the Lord God caused a deep sleep to fall upon Adam, and he slept ; and he took one of his ribs, and closed up the flesh instead thereof : and the rib which the Lord God had taken from man made (or, as it reads in the margin, he builded) he a woman, and brought her unto the man." — GEN. ii. 18, 21, 22.

Was not Jehovah aware that it would be bad for man to be alone when he made him ? Was not the necessity just as great for a helpmeet when he was first created as at any future time ?

But why did this writer represent man as first created, and woman as an after-thought, — a help to man, only necessary because man could not be comfortable without her ? We can readily find the spirit that inspired him, in the disposition that the stronger sex among all barbarous and semi-barbarous nations has had to trample upon the rights of the weaker. We may see the influence of the same unholy spirit in the curse pronounced upon woman, put by this writer into the mouth of Jehovah, "Thy desire shall be to thy husband, and he shall rule over thee ;" and in the foolish and brutal command of Paul, "Let the woman learn in silence with all subjection. But I suffer not a woman to teach, nor to usurp authority over the man, but to be in silence. For Adam was first formed, then Eve" (1 Tim. ii. 11-13). What a reason ! Had this domineering, self-styled apostle but studied science half as much as he had old Jewish traditions, he would have learned that the best of every thing has ever been the most recent ; and, if woman was the last made, it is good evidence that she is superior to man. If woman

had written the Bible, how different all this would have been !

The making of man was ridiculous enough ; but the making of woman is still worse. Adam cast into a deep sleep, mesmerically, anæsthetically, or otherwise, — and a very deep sleep it must have been, — Jehovah opens his side, — whether with his finger, a knife, or some surgical instrument, we are not informed, — takes out one of his ribs. Was the vertebra attached to it, and that transformed into the skull ? Does he hold the bloody rib in his hand ? or does he lay it on the ground, and say “Abra-ca-dabra hi presto change,” and in an instant does the crooked, gory bone become a fair, erect, and lovely woman ? As likely so as not, taking this story for truth. And then Adam awakens to find the desire of his soul gratified ; and, having named so many animals, the habit is now strong in him, and he says, “This is now bone of my bones, and flesh of my flesh : she shall be called woman because she was taken out of man.” But how he knew what took place while he was in a deep sleep we are not informed. Possibly Jehovah communicated it to him in a private conversation ; or did he discover that a rib was lacking, and surmise the rest ?

God having created man and woman by miracle, — a God, too, who is altogether independent of law, — what splendid specimens of the race they must have been !

“The loveliest pair
That ever yet in love’s embraces met :
Adam, the goodliest man of men since born
His sons ; the fairest of her daughters, Eve.”

As Miller says, “Adam, the father of mankind, was

no squalid savage of doubtful humanity, but a noble specimen of man; and Eve a soft Circassian beauty, but exquisitely lovely beyond the lot of fallen humanity." And this is reasonable. Made in the image of God, turned out of his own workshop, — the work intrusted to no apprentice or even journeyman, — they must have been the most magnificent and beautiful pair that ever trod the earth. And their intellectual capacity must have been in harmony with their physical perfection. The one indeed necessarily accompanies the other. No curse was pronounced on man's intellect in consequence of the fall: it seems rather to have increased his intelligence. Of his children, one becomes a shepherd and the other a farmer; very honorable pursuits, and both indicating a position far in advance of the savage state. In the seventh generation from Adam, which could not have been more than three hundred years, we find his descendants living in tents, playing on harps and organs, and working in brass and iron (Gen. iv. 16-22).

What says archæology of the condition of man at an early period of his history? It is now well known, that in every country where stone, copper, tin, and iron are found, that man in his development has passed from a primitive barbarous condition through the ages of stone, bronze, and iron, in each of which his weapons and utensils have been made of these materials; and each of these ages has continued for many thousands of years.

Of the "primeval Briton," Daniel Wilson, professor of history in University College, Toronto, says, "Intellectually, he appears to have been in nearly the lowest stage to which an intelligent being can sink. Morally,

he was the slave of superstitions, the grovelling character of which can be partially inferred from the indications of his sepulchral rites. Physically, he differed little in stature from the modern inheritors of the same soil; but the form of skull indicated diverse ethnical relations. His cerebral development was poor; his hands, and probably his feet also, were small; while the weapons with which he provided himself for the chase, and the few implements that ministered to his limited necessities, disclose only the first rudiments of that inventive ingenuity which distinguishes the reason of man from the instincts of the brutes." *

Of the stone period, during which these primeval Britons lived, he says, "We are furnished with satisfactory evidence of a thinly-peopled country, occupied by the same tribes, with nearly unchanging habits, for many ages." † Were these wild savages that for ages inhabited Great Britain the descendants of Adam and Eve, between Cain and Tubal Cain, that had wandered off from Asia to the British Isles? The mouldiest theological foggy will hardly take such a position.

"However our pride may revolt at the fact, we are forced to acknowledge that man, as he stepped at first upon this part of the earth (France), bore, in his instincts, his passions, and his wants, no small resemblance to the brutes. Fire was still unknown to him: his teeth show that he drew his nourishment from roots and other growths of the soil; and, when he began to use flesh for food, he must have devoured it raw. . . . A skin, stripped from the beasts he had slain, formed the clothing of the primeval European. His limbs were

* The Prehistoric Annals of Scotland, p. 40.

† Ibid, 301.

exposed to the inclemencies of the weather ; and when he would seek rest or protection from the cold, or from wild animals, his necessary resort was to the forest, or to dark cavities in the earth.” * Here is no Adam, the most perfect man ; no Abel, keeping sheep ; no Cain, building a city ; no Tubal Cain, shaping brass and iron.

Could the descendants of Noah have forgotten all the arts practised by them at the building of Babel's tower, and sunk into such savages as these ? The period when they existed is too ancient, if other considerations did not forbid.

The calculations of the Swiss archæologists indicate that men inhabited Switzerland from six to seven thousand years ago, who used polished-stone implements.† Could these have been descended from a pair created long after they were in existence ? Yet we know that this people that used polished-stone weapons were preceded by a ruder people, who used unpolished-stone weapons ; and there is good evidence to show that they existed for an immense period. The paleolithic-stone age, as it has been termed, is now acknowledged by most archæologists to be of tens of thousands of years duration. The skulls belonging to this period generally indicate small mental capacity, and are accompanied with prognathous jaws, which must have made their possessors as ugly as they do the brutal savages of Australia to-day.

This Genesical story represents man in the full possession of language : from the first, Adam and Eve understood all that God said, and they spoke as appro-

* Smithsonian Report, 1867, p. 336.

† Lubbock's Prehistoric Times, p. 320.

propriately to him as he did to them. But how could a man understand a language before he had heard it spoken. And how could he utter sentences before he had spoken words? Did Jehovah practise school-teaching as well as panorama-showing, — certainly quite as creditable a business, — and give Adam and Eve at least the rudiments of the Hebrew language? In the very nature of things, language must have grown from the simplest beginnings to the condition in which we find it among the most ancient nations; and this is the opinion generally, if not universally, entertained by the students of language at the present time. Their views are expressed in “Chambers’ Encyclopedia;” article, philology. “Every thing tends to show that language is a spontaneous product of human nature, — a necessary result of man’s physical and mental constitution.”

If every thing tends to show that language is a spontaneous product of human nature, then every thing tends to show the falsity of the Bible account of Adam’s naming the animals, and of his conversations with God and his wife, when there could have been no time for the natural formation of a language.

“The first rudiments of language,” says the philologist, John Crawford, “must have consisted of a few articulate sounds, in the attempts made by the speechless but social savages to make their wants and wishes known to each other; and, from these first efforts to the time when language had attained the completeness which we find it to have reached among the rudest tribes ever known to us, countless ages we must presume to have elapsed.”

The writer of the second account of creation represents the serpent as condemned to walk upon its belly,

in consequence of its having tempted Eve to eat of the forbidden fruit. It is evident, then, that the serpent must have walked in some other way previous to this curse. But geology reveals to us the existence of the serpent, similar in its form to that of the present time, as early as the eocene tertiary. If the serpent, millions of years before the creation of man, moved as serpents move now, it is evident that their present mode of progression cannot have been produced by any curse of Jehovah.

This writer also represents the death of human beings as a result of the curse pronounced upon them in consequence of their disobedience. The New Testament indorses the statement: "By one man, sin entered into the world, and death by sin" (Rom. v. 12). "By man came death" (1 Cor. xv. 21). But if this was the case, if Adam had not sinned, his body would have been immortal. No fires could have burned him, no floods have drowned him, no poison affected him, no accident injured him; for, if he could be injured, a repetition of injuries of sufficient extent would have injured him beyond recovery. Gunpowder could not have harmed him; or, if a bomb-shell could have blown him to pieces, his constitution must have been such that the scattered pieces would instantly return, and make the man whole. He must, indeed, have been as impenetrable and as indestructible as an ultimate atom. But how could a human being, constituted as we are, be so different in his capacities? No flesh-and-blood man could this have been. And this explains the whole mystery. Adam never had an existence, save in the brain of the Hindoo dreamer who originally created him, and the people who have since then believed in what

the Hindoo created and the Jewish cosmogonist accepted, and, with some modifications, foisted upon the Jewish people, and subsequently on the Christian. He is a mythical man, and could, therefore, be and do what the Bible states as readily as Hercules could bring the three-headed dog from the infernal regions, and Atlas support the world upon his shoulders.

"But the Bible was never intended to teach men science."

The Bible does, however, profess to tell, and very definitely, how the world was made; and, if it is not done scientifically, it must be done falsely.

Suppose a man should undertake to tell where the important organs of the body are situated, and he informs us that the heart is under the right arm, the stomach under the left, and the liver at the back of the neck; and, when you bring up these gross blunders, he answers, "Oh, I did not intend to teach physiology!" You reply, "You undertook to tell where the important organs of the body are situated, and this you could only do by stating the facts as physiology states them; and, failing to do this, you made gross misstatements." So we say of these accounts in Genesis: the writers undertook to tell the order in which the heavens, the earth, and its varied organic existences, came into being; and, failing to do this geologically, they did it falsely.

"God dealt with the Jews as with children: he spoke of things, not as they existed, but as they appeared. What could the ignorant Jews have known of the Silurian and Devonian periods, the ichthyosaurus and the ramphorhynchus? How could they have credited the revelations of geology, if they had been made to them?"

*The world would never have received such a revelation.**

But what intelligent father would treat his children in such a manner as that ? A father wishes to convey to his children a knowledge of the form of the earth. It appears to be flat. They cannot understand how persons can live on the other side of it, if they are told that it is round ; and, in short, they never could receive such a statement. So he says, “ My dear children, the world on which we live is flat, — flat as the table from which you eat your dinner.” What a foolish father that would be ! His children will learn the facts some time, and then they must despise him. But what better is Jehovah ? The delicate Jewish stomach could not bear the truth, so he fed them on falsehoods ; gave them to understand that the earth was the largest and most important body in the universe ; told them that grass, herbs, and fruit-trees came into existence before the sun, and that there were three evenings and mornings before the sun was created ; told them that it had not rained upon the earth till just before man’s appearance, and that all things were created less than six thousand years ago ; well knowing that all this was false, and that science would some day make it manifest. If a revelation from God can only perpetuate the errors of the people to whom it is given, it had better not be given ; for it then gives the highest possible sanction to error, and prevents the discovery of truth. Had it not been for these Genesical fables, we should have been much farther advanced in geological knowledge to-day.

* See Miller’s Testimony of the Rocks, pp. 191, 192.

“But the Bible, to give a full scientific description of the creation of the world and its inhabitants, must have been as large as a mountain; and no man could have read it in a life-time.”

It is not necessary that its description should be full: it might be correct, and no longer than it is at present. Suppose that it had read something like this, — how differently scientific men would have regarded it.

1. Millions of ages ago, the heavenly bodies and the earth came into being, — the sun many times larger than the earth, which turns over and revolves around it; and thus day and night and the seasons are produced.

2. At a very early period in the earth's history, it was a fluid mass of matter, exceedingly hot, and surrounding it was a very large atmosphere.

3. In process of time, the earth became cool enough for a rocky crust to form upon its surface.

4. As yet, there was no water on the earth; but it continued to cool till the water condensed upon its surface from the great atmosphere above: the hollows of the earth were filled and the oceans came into being.

5. For vast ages, rain fell from the clouds upon the dry land, and rivers carried down sediment into the seas, at the bottom of which it was laid, where it hardened in time into rocks many miles in thickness.

6. At first, the land-surface of the earth was small; but, as the earth continued to cool, its crust contracted, hills and mountains were produced, and continents gradually formed.

7. Life began in the ocean, simple forms of animals and vegetables side by side together.

8. And the waters brought forth abundantly, — corals, living in stony habitations, jointed animals

with shelly coverings, and mollusks that clung to the rocks, fed on the sea-weeds, and swam by myriads in the waters.

9. They grew and multiplied for such a vast period, that their remains, at the bottom of the seas, made rocks thousands of feet in thickness.

10. Then the waters brought forth fishes, — strange fishes with bony coverings, — new corals, shells, and jointed animals; and, on the dry land, moss-like plants and ferns grew; and, by the river-side and in the marshes, reeds sprang up.

11. Creeping things also made their appearance, and reptiles crawled and hopped over the ground.

12. Multitudes of trees sprang up, so that the dry land and the marshes were covered. Ferns and reeds and club-mosses, tall in stature, grew and fell; and their bodies made, when covered with sediment, beds of coal, fuel for the coming days.

13. And all the early forms of life perished one by one, and one by one new forms took their places; and life appeared in successively higher forms from age to age.

14. Birds of strange forms, some of them very reptile-like, abounded, many of them of gigantic size.

15. Mammals appeared, but they were at first small in size and few in number; and gigantic sea and land reptiles, so that both land and water swarmed with them.

16. Mammals appeared, in constantly-increasing numbers and of larger size, from age to age; and the land was everywhere occupied by them.

17. Man at last came into being, low and brutal, and slowly advanced to a more perfect form.

